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ABSTRACT

This study examined the relationship of home and family, school behavior, peer relations, and self-concept with reading achievement among Head Start graduates. Participating in the study were 43 girls and 37 boys ranging in age from 8 to 17 at the time of the study. Two groups were selected. The first group, identified as resilient, had average reading achievement scores on the Iowa Test of Basic Skills (ITBS) above the 75th percentile throughout their schooling. The second group had average ITBS reading achievement scores between the 25th and 50th percentiles. The ethnic breakdown of the participants was as follows: 40 Latinos, 10 European Americans, 26 African Americans, and 4 Native Americans. Data on home and family, school behavior, peer relationships, and self-concept were collected from interviews with the student and his or her caretaker and ratings completed by participant-nominated teachers. Findings indicated that reading proficiency was positively and significantly correlated with the following: generous psychological autonomy granting by parents as judged by parents and children; behaviors demonstrating harmonious relationships with peers and teachers, scholastic motivation, and emotional stability (as rated by teachers); and behavioral, global, and scholastic self-concept. Reading proficiency was negatively and significantly correlated with peers' classroom activities, homework engagement, and cooperation with classroom rules. There were no significant relations between reading achievement and classroom activities, homework engagement, cooperation, or antisocial behavior as rated by the target child and teachers combined. Both mother's and child's verbal ability were positively correlated with reading proficiency and grade point average. (Contains 12 references.) (KB)

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Project Overview: Statement of the Problem

Head Start aims to enrich the learning skills, social skills, and health status of economically disadvantaged children so that they may begin kindergarten or first grade on a more equal footing with more advantaged children (Currie, 1995). This emphasis on good beginnings for children's educational careers hints at the overall importance of education in general. As Figure 1 shows, increased education is an important contributor to an individual's earning potential. As such, it is important to focus on factors that contribute to the development of resilience and educational success in Head Start children. Who are the resilient ones and what do we know about how to explain the course of their life trajectories?

Project Overview: Objectives

Given the exploratory nature of this study, our primary objective in this poster is to consider one outcome, reading achievement, as related to four potential influences: Home and Family, School Behavior, Peer Relations, and Self-Concept. Extensive rationales guided each area of investigation. To save space, those hypothetical formulations will not be reviewed here, but one of those aspects (parenting styles) is further illustrated at this research conference (McCullough & Watt, Parenting styles as related to academic achievement: A developmental perspective. Thursday, June 29th, Poster Session 4-6 P.M., #T69.)

To simplify and abbreviate the findings, we shall present primarily correlations with the average Reading Achievement %ile scores, most of which have survived various statistical corrections for multiple tests and potential contamination from other explanatory variables.

Project Overview: Operational Measure of Resilience

When a longitudinal project to study Head Start "graduates" was initially proposed to the Superintendent of the Denver Public Schools (DPS) in 1994, he proposed that we begin the research by studying Head Start children "who do well in school." Consistent with the aims of the administration, we employed excellence in reading proficiency as our proxy for resilience. [Despite the fact that more than a third of Head Start children *then* and the majority of Denver school pupils *now* are Latino and many are monolingual in Spanish, only reading proficiency in English was considered.]

We expected truly exceptional readers to display excellence all around: in their citizenship at school, in their participation in extracurricular activities, in their family and peer relations, in their spiritual lives, in their athletic, artistic and community endeavors, and – most important of all – in all aspects of their academic performance. The criterion we chose to reflect "truly exceptional reading ability" was a consistent record of Reading Achievement scores on the Iowa Test of Basic Skills (ITBS-R) above the 75%ile by national standards.

Project Overview: Subject Population

Head Start graduates enrolled in DPS who had overall ***average*** ITBS reading scores throughout their school careers exceeding 75th %ile were chosen as the primary targets of interest for the study. We also selected a contrast group of Head Start graduates in DPS with consistent ITBS reading scores between the 25th and 50Th %iles. Some demographic characteristics of the final 80 children in the sample are as follows:

- Ages ranged from 8 to 17 at the time of study.
- Gender representation was close to equal (43 girls, 37 boys).
- Ethnic representation heavily favored select minority groups:

Latino (n=40)	African American (n=26)
European American (n=10)	Native American (n=4)

- A*verage* ITBS Reading scores ranged from the 10th %ile to the 98th %ile (mean=56.59).
- A father figure was found in 54 of the homes, and 26 families had single-parent mothers.
- The mean for parental social class was at 83 on the Index of Social Position (Hollingshead & Redlich, 1958; Watt, 1976), which is very slightly below the mid-point of the scale.
- The mean grade-point average was 2.91 on a 4-point scale.

Method: Procedures

- Interviews were administered simultaneously in separate rooms to both the child and his or her caretaker.
- Each interview consisted of a battery of self-report measures that were administered orally to both parent and child.
- Participants also nominated their teachers who were later contacted to complete a behavioral rating form (Pupil Rating Form and School Engagement Form) for the students who had nominated them. The teachers were blind to the purposes of the study.

Method: Measures

Home and Family

- Wechsler Adult Intelligence Scale-Revised, Information Subtest
- Wechsler Child Intelligence Scale, Information and Block Design Subtests
- Index of Social Position (Hollingshead & Redlich, 1958; Watt, 1976)
- Parent Involvement Measure - Revised (McCullough, 1997). This is a 17-item revision of the Parent Involvement Measure (Paulson & Caldwell, 1994)
- Report of Parenting Behavior Inventory - Parent and Child Versions (Margolies & Weintraub, 1977)

School Behavior

- ITBS Reading (1988-1997)
- Pupil Rating Form (Watt, 1996)
- Self Report of School Engagement (Diaz, 1996)

Peer Relations

- Friend Engagement Questionnaire (Diaz, 1996)

Self-Concept

- The Self-Perception Profile for Children (Harter, 1985)

Analyses

- Reading achievement was the main outcome variable of focus (the mean score summarizing ITBS reading achievement test scores for the child's entire school career up to 1998, referred to as "career reading achievement").
- Verbal ability was obtained using the WAIS-R Information subtest (for mothers) and the WISC-III Information subtest (for children).
- Grade point average was from Spring 1998 only.
- Partial correlations on reading achievement with:
  - Aspects of Parenting (combined parent and child reports)
  - Classroom Behavior as rated by three teacher reports (average taken) on the target child (4 factor scales)
  - Engagement (self-report of target child plus the average of three teacher-reports on target child; target child reports on three peers)
  - Self-Concept (4 factor scales)
  - Mother's and Child's Verbal Ability
- Partial correlations on verbal ability with grade point average
- Reported correlations have been adjusted for SES

Results

- Reading Achievement x Aspects of Parenting (see Table 2)
  - acceptance vs. rejection
  - psychological autonomy vs. psychological control
  - firm control vs. lax control
  - parental involvement in child's school life
- Reading Achievement x Classroom Behavior (see Table 3)
  - scholastic motivation
  - extraversion
  - harmony
  - emotional stability
- Reading Achievement x Engagement - Self-Report and Teacher-Report (see Table 4)
  - classroom activities
  - homework
  - cooperation with classroom rules
  - antisocial activities
- Reading Achievement x Engagement - Target-Report on Peers (see Table 5)
  - classroom activities
  - homework
  - cooperation with classroom rules
  - antisocial activities
- Reading Achievement x Self-Concept (see Table 6)
  - scholastic self-concept
  - social self-concept
  - behavioral self-concept
  - global self-concept
- Reading Achievement x Verbal Ability (see Figure 2)
  - child's verbal ability
  - mother's verbal ability
- Verbal Ability x Grade Point Average (see Figure 3)
  - child's verbal ability
  - mother's verbal ability

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MEDIAN EARNINGS BY YEARS OF SCHOOL COMPLETED

Full-time Workers, 18 Years and Over, by Race and Gender: 1989

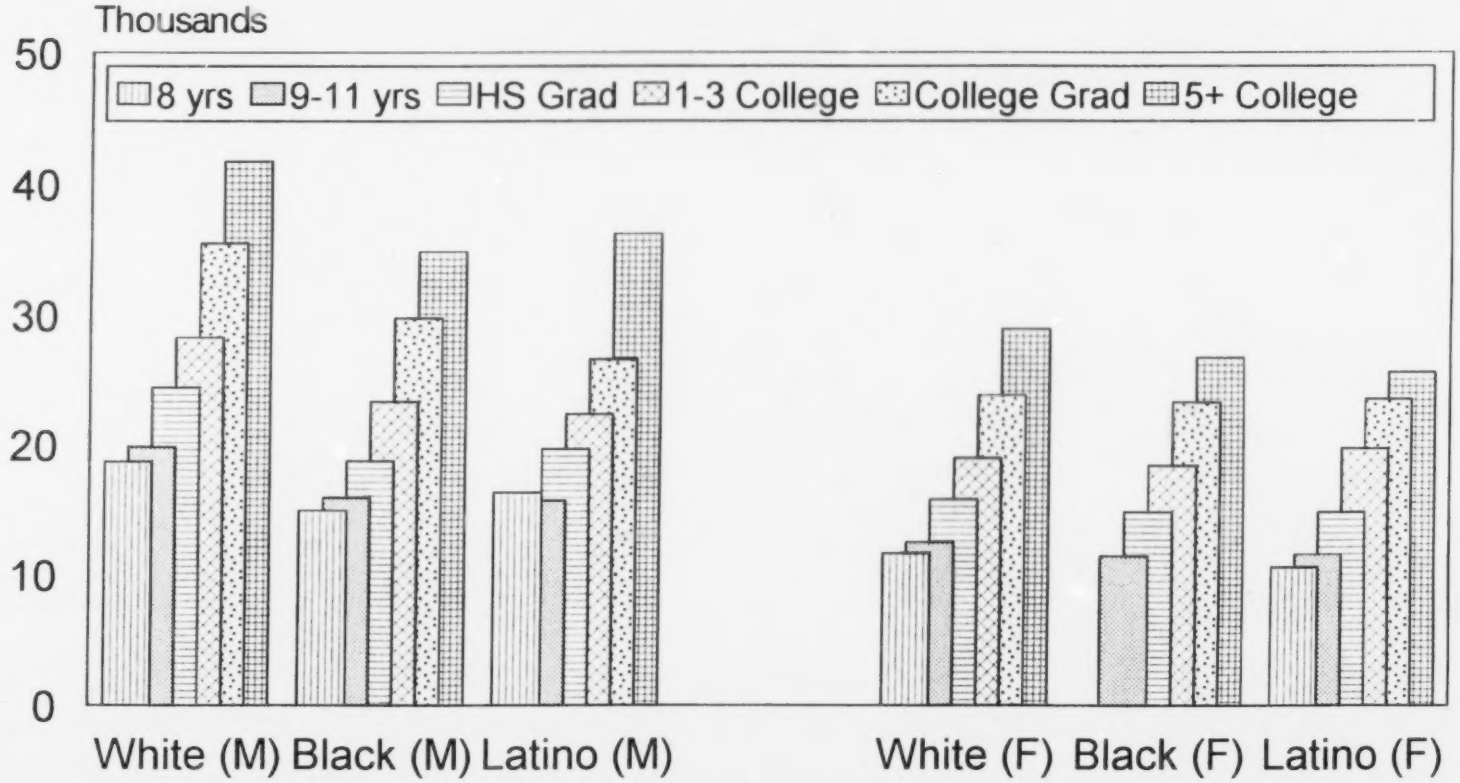

Figure 1. Annual earnings of workers in the United States. Source: Bureau of the Census, "Educational Attainment in the United States: 1988 and March 1989," Current Population Reports, Series P-20, No. 451 (August 1991), pp. 671-78.

TABLE 1

SUMMARY OF DESCRIPTIVE FEATURES OF SUBJECTS IN THE RESILIENCE PROJECT

ID	ITBS Reading %ile Mean	GPA Spring 1998	Grade Level 1998	Mom's WAIS Info Score	Child's WISC Info Score	Child's WISC Block Design Score	Child's WISC IQ (est.)	Sex	Race	Father in the Home	2-factor Social Class Index
15	98.10	4.51	9	15	17	16	138	M	W	Y	33.0
5	94.71		4	8	16	12	123	M	L	Y	73.5
67	93.71	2.67	6	10	13	19	135	M	B	N	70.0
65	92.75	4.00	6	7	15	11	117	F	L	Y	83.0
28	92.50	1.67	5	14	12	14	117	M	W	Y	70.0
71	92.44	4.08	11	9	14	8	106	M	B	Y	67.5
66	91.14	3.29	6	7	15	9	112	F	L	N	134.0
40	88.86	4.19	10	7	15	12	120	M	W	Y	83.0
81	87.92	3.93	10	9	16	12	123	F	B	Y	82.5
68	86.64	4.60	9	10	16	8	112	F	L	Y	134.0
36	85.11	4.00	5	8	9	10	97	F	L	Y	76.0
35	83.91	3.86	8	12	16	14	129	M	L	Y	73.0
56	83.00	0.71	11	6	11	11	106	M	L	Y	82.0
58	82.71	3.00	6	11	11	10	103	F	L	N	63.0
61	81.91	3.14	9	7	10	9	97	M	W	Y	86.0
69	81.82	4.12	10	6	10	13	109	F	L	Y	70.0
27	81.50		5	9	17	9	117	M	B	Y	82.0
8	78.17	2.00	6	4	11	10	103	F	L	Y	90.0
59	77.56	2.90	11	10	10	8	94	F	L	N	51.0
55	77.25	2.63	5	6	17	15	135	M	L	Y	82.0
12	77.14	1.86	6	6	13	4	91	M	L	Y	77.0
16	76.86		4	12	10	19	126	F	W	N	70.0
19	76.63	3.18	9	8	14	13	120	F	L	Y	73.5
25	76.25	1.86	8	5	13	14	120	M	L	N	58.0
9	75.83	3.86	6	8	11	7	94	F	L	Y	64.0
20	74.50	3.56	6	6	14	10	112	M	B	Y	71.0
13	74.43	3.89	9	8	13	10	109	F	N	N	77.0
60	74.20	2.13	9	8	10	12	106	M	L	N	85.0
2	73.43	3.75	5	6	15	10	115	M	B	Y	83.0
34	71.88		4	8	11	8	97	F	B	Y	76.0
44	71.80	2.57	9	5	9	9	94	F	B	N	77.0

42	71.27	3.20	9	6	10	11	103	F	L	Y	92.5
72	71.13	2.91	6	5	10	10	100	M	L	Y	111.5
33	70.42	3.31	9	7	17	5	106	M	W	Y	98.5
70	69.50	4.18	11	6	10	10	100	F	L	Y	70.0
32	69.42	3.53	9	9	9	11	100	F	B	Y	92.0
63	68.89		12	9				F	B	Y	77.0
30	68.83		9	4	12	9	103	M	L	N	84.0
39	62.75	1.57	5	6	13	8	103	F	B	Y	60.0
85	61.89	2.67	6	3	14	9	109	M	L	Y	134.0
22	61.00		9	8	5	11	88	F	L	N	82.0
17	56.00	3.43	7	8	13	16	126	F	L	Y	73.5
1	54.71		4	9	11	10	103	F	B	N	84.0
37	50.75	3.00	5	9	9	8	91	F	W	N	70.0
38	49.00	2.89	3	6	10	8	94	M	B	Y	70.0
79	49.00	3.43	8	6	14	12	117	M	L	Y	80.5
76	48.64	2.83	10	8	8	8	88	F	L	Y	95.5
82	47.38	2.50	6	6	9	6	85	F	B	Y	113.5
11	45.57	2.49	6	7	10	15	115	F	N	N	58.0
14	45.00	3.44	6	7	13	14	120	M	L	Y	83.0
62	43.14		4	4	10	8	94	M	B	N	58.0
46	43.00		6	12	11	12	109	F	N	N	70.0
83	41.00	2.71	7	7	6	4	71	F	B	Y	67.5
88	40.71		6	7	11	8	97	M	B	Y	83.0
86	40.17	0.43	9	5	10	14	112	M	B	N	96.0
3	40.00		4	7	7	6	80	F	L	Y	89.0
57	39.43		6	12	13	10	109	F	B	N	82.0
21	38.88		5	11	12	1	80	F	B	N	51.0
29	34.50		4	12	13	14	120	F	W	Y	70.0
23	33.38	3.11	6	4	11	8	97	F	L	Y	128.0
49	32.75	2.50	6	7	8	10	94	M	B	N	70.0
52	31.75		5	2	9	13	106	F	L	N	70.0
75	30.92	3.73	10	7	8	8	88	F	L	N	120.0
54	30.50		4	10	10	6	88	M	W	Y	54.5
18	29.00	2.43	7	4	7	8	85	M	L	N	96.0
10	28.90	2.17	10	4	8	8	88	M	L	Y	90.0
73	26.00		5	6	6	14	100	M	L	Y	77.0
43	24.82	2.86	9	5	7	9	88	F	B	Y	102.0
77	24.11	2.50	7	8	6	4	71	F	L	Y	118.5

7	22.50	2.57	5	5	9	2	74	M	B	Y	98.5
24	21.91	0.38	9	5	9	13	106	F	L	Y	109.5
84	21.57	2.25	6	6	5	9	83	F	B	Y	95.5
6	19.90	0.80	9	5	8	10	94	M	L	Y	105.5
41	19.67		9	5	5	11	88	M	L	N	134.0
53	19.60		5	6	9	3	77	M	B	Y	108.0
78	18.33	3.00	7	6	8	8	88	M	L	Y	80.5
4	17.80		4	10	10	11	103	F	W	Y	58.0
45	15.00	3.14	6	5	4	1	56	F	L	N	96.0
26	12.63		5	3	6	5	74	F	B	N	84.0
51	9.67		4	6	5	9	83	M	N	Y	77.0
N	80.00	57.00	80.00	80.00	79.00	79.00	79.00	F = 43	L = 40	Y = 54	80.00
M	56.59	2.91	6.95	7.25	10.78	9.80	101.66	M = 37	B = 26	N = 26	83.32
SD	25.38	0.97	2.23	2.56	3.27	3.61	16.30		W = 10		20.42
									N = 4		

Reading Achievement x Aspects of Parenting

	acceptance vs. rejection	psychological autonomy vs. psychological control	firm control vs. lax control	parent involvement in child's school life
average ITBS reading	.174	-.289**	.044	-.021
acceptance vs. rejection		-.081	-.058	.459****
psychological autonomy vs. psychological control			.038	-.023
firm control vs. lax control				-.355****

**p<.01, ****p<.001 (n=77)

Table 2. Reading achievement correlated with aspects of parenting. Generous psychological autonomy granting by parents (as judged by both parents and children) was favorably related to reading proficiency.

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Reading Achievement x Classroom Behavior

	scholastic motivation	extraversion	harmony	emotional stability
average ITBS	.252~	.160	.281*	.244~
scholastic motivation		.124	.729****	.643****
extraversion			-.045	-.337*
harmony				.795****

~p<.10, *p<.05, ****p<.001 (n=52)

Table 3. Reading achievement correlated with teachers' reports of target child's classroom behaviors. Career-long reading proficiency was significantly correlated with behaviors demonstrating harmonious relationships with peers and teachers, and marginally associated with scholastic motivation and emotional stability.

Reading Achievement x Engagement

Target Children's Reports on Themselves and Teachers' Reports on Target Child

	classroom activities	homework	cooperation with classroom rules	antisocial activities
average ITBS reading	.139	-.148	.141	.126
classroom activities		.506****	.813****	.789****
homework			.486****	.505****
cooperation with classroom rules				.819****

****p<.001 (n=50)

Table 4. Reading achievement correlated with engagement as reported by the target child and the target child's teachers. None of the above aspects were significantly correlated with reading proficiency.

Reading Achievement x Engagement
Target Children's Reports of Their Peers

	classroom activities	homework	cooperation with classroom rules	antisocial activities
average ITBS reading	-.343*	-.394***	-.380**	.094
classroom activities		.649****	.761****	.065
homework			.708****	.243~
cooperation with classroom rules				.237

~p<.10, *p<.05, **p<.01, p<.005, ****p<.001 (n=47)
note: analyses only done on grades 5-12

Table 5. Reading achievement correlated with engagement of peers as rated by target child. Peers' classroom activities, homework engagement, and cooperation with classroom rules were inversely related to the reading proficiency of the target child.

Reading Achievement x Self-Concept

	scholastic	social	behavioral	global
average ITBS	.449***	.154	.279*	.332***
scholastic		.343***	.459****	.556****
social			.234*	.423****
behavioral				.670****

*p<.05, ***p<.005, ****p<.001 (n=77)

Table 6. Reading achievement correlated with aspects of self-concept. Career-long reading achievement was significantly associated with all aspects self-concept except social relations. Understandably, the strongest correlation was with scholastic self-concept.

Reading Achievement x Verbal Ability

Mother's and Child's

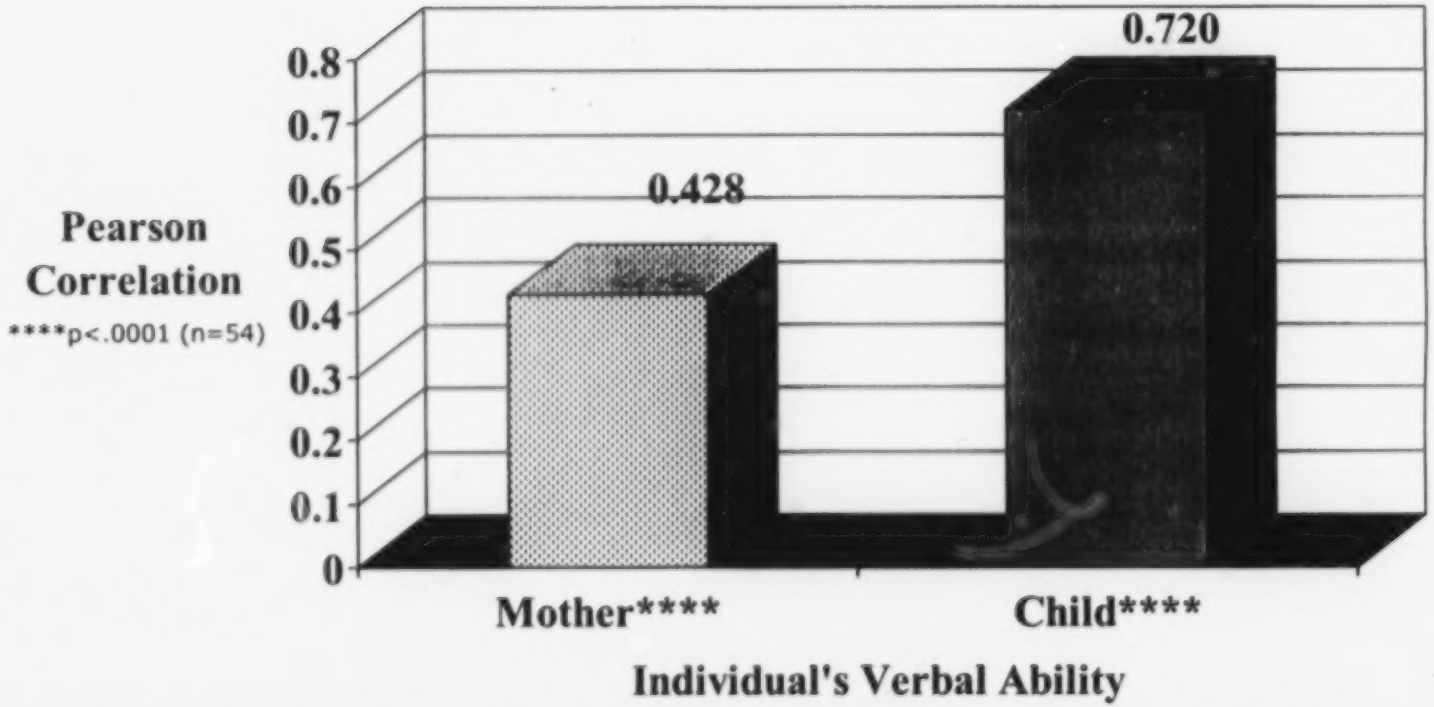

Figure 2. Reading achievement correlated with child's and mother's verbal ability. Career-long reading achievement correlated positively and significantly with the measured verbal ability of both the mother and (more strongly) with the child. Child's and mother's verbal ability were also positively correlated (r=.310, p<.05).

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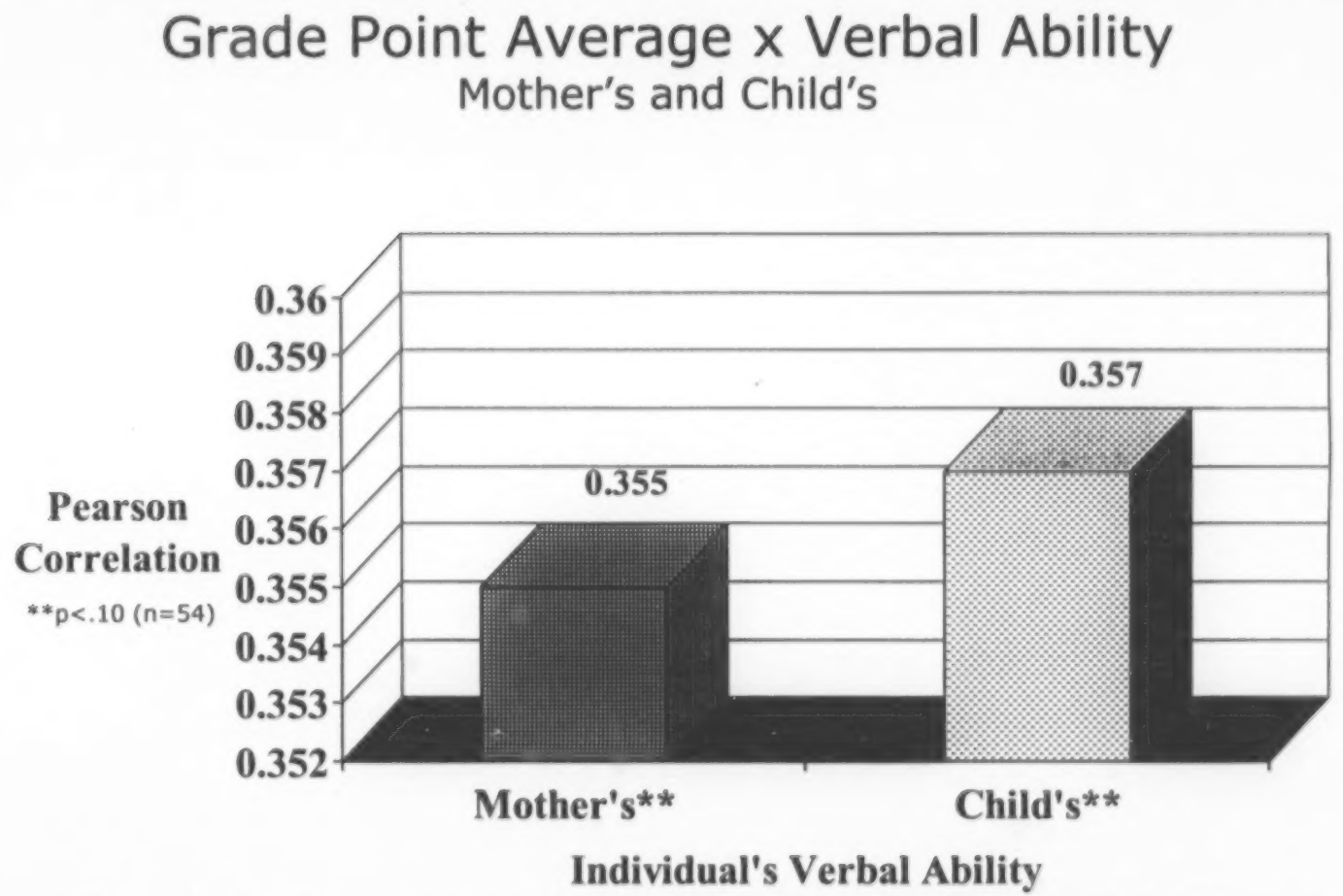

Figure 3. Grade point average correlated with child's and mother's verbal ability. Both mother's and child's verbal ability were relatively equal in their relation to child's grade point average. Again, child's and mother's verbal ability were positively correlated (r=.310, p<.05).

Statements of Findings

- Reading proficiency was positively and significantly correlated with the following factors:
  - generous psychological autonomy granting by parents (as judged by both parents and children)
  - behaviors demonstrating harmonious relationships with peers and teachers, scholastic motivation, and emotional stability (as rated by teachers)
  - behavioral, global, and especially scholastic self-concept
- Reading proficiency was negatively and significantly correlated with:
  - peers' classroom activities, homework engagement, and cooperation with classroom rules
- There were no significant relations between reading achievement and classroom activities, homework engagement, cooperation, or antisocial behavior as rated by target child and teachers combined.
- Both mother's and child's verbal ability were positively correlated with reading proficiency and grade point average.

Conclusions

Children who are proficient readers appear to exhibit behaviors that are consistent with the norms of school culture. These children are confident and secure in their ability to perform scholastically and to participate in the school environment. Not only do they have this view of themselves, but teachers have this view of these students as well. The confidence of these children in their own abilities as individuals carries over to how they see themselves in relation to their peers; the activities of their peers are separate from how these students perceive themselves (i.e. - as good students). Perhaps this autonomous perspective has been fostered by parents who encourage and allow their children more freedom in gaining experience both scholastically and in general.

Limitations and Questions for Further Research

Given that the presence of another language spoken (Spanish in this sample) was not considered, future research should incorporate the role of dual languages when considering achievement outcomes. The role of a second language may be important in evaluating indicators of verbal ability in English (such as reading achievement). Also, the sole use of English-language measures of verbal ability may slight an individual's proficiency in the second language; capitalizing on the information provided by both language experiences may provide a richer picture of verbal ability.

Combining the ratings of the target child with the teachers' reports may muddle the ability to uncover the true behavior exhibited by the child. Separating these ratings may reveal the ability to distinguish those behaviors that facilitate educational success (or, accommodating one's behavior to the norms of school culture) vs. belief in an individual's potential; teachers may be more sensitive to this subtlety.

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